

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
The Competitive Bidding Procedures and)	AU Docket No. 17-182
Certain Programs for the Connect America)	WC Docket No. 10-90
Fund Phase II Auction (Auction 903))	
)	September 18, 2017

COMMENTS OF THE INSTITUTE FOR LOCAL SELF-RELIANCE

I. Introduction

The Institute for Local Self-Reliance (ILSR) mission is to provide innovative strategies, working models, and timely information to support environmentally sound and equitable community development. To this end, ILSR works with citizens, activists, policymakers, and entrepreneurs to design systems, policies and enterprises that meet local or regional needs; to maximize human, material, natural, and financial resources; and to ensure that the benefits of these systems and resources accrue to all local citizens.

II. Summary

ILSR believes rural America will be best served by additional safeguards to ensure Connect America Funds return the greatest investment to local residents and businesses.

III. Entities Must Offer Carrier of Last Resort Guarantee

Bidders must be prepared to service every premise in the areas for which they bid. Bidders that are not able to deliver services due to issues such as weather, foliage, or structures, cannot logically be considered a carrier of last resort.

Wireless services, including satellite, are often unable to guarantee such coverage. In particular, satellite service has required line-of-sight to a satellite, which rules out many premises located on the “wrong” side of a ridge or hill.

Connect America Funds are a universal service program. Allowing firms, technologies, or business models that are unable or unwilling to connect everyone in the target area is particularly harmful for this program because these funds will fracture a market that is already difficult to serve. These areas are already the hardest to connect, requiring a subsidy. There is no business model, subsidized or not, to connect those who are left behind because a satellite or wireless provider cannot extend a signal to them while

serving nearby premises. As such, any bidder must have a plan to connect every premise within the territory.

In ILSR's experience with state and federal programs as well as last-mile technologies, there is strong tendency to over-estimate the capacity of a technology to provide a high-quality last-mile solution. As such the FCC must either reject some technologies that are not likely to offer that 100 percent coverage or ensure that it has a rapid and efficient respond to CAF recipients that are not able to meet their promises. The FCC must be prepared to deal with over-zealous bidders that cannot meet the requirements of universal coverage.

A final consideration is technologies that degrade significantly during adverse weather. Rural residents dependent on satellite Internet access experience frequent service interruptions, especially during poor weather. These interruptions are particularly frustrating when an attempt to send data fails, which not only represents a significant inconvenience but also a serious waste of precious bandwidth in a data-capped plan. Given these limitations, we question how the FCC could subsidize a satellite Internet service as meeting the requirements of a carrier of last resort connection.

The FCC must ensure that successful bidders are capable of offering a high-quality service to 100 percent of the premises within the relevant territory, using a technology that can work the vast majority of the time.

IV. Mean Opinion Score (MOS) Data Should Be Collected By The FCC to Ensure Auction Winners Offer High-Quality Telecommunications Services

The winners of the auction must be able to demonstrate high-quality broadband Internet *and* telephone services. Under Sec. 214 and 254 of the Communications Act,¹ voice service cannot be sacrificed. In order to assure the quality of voice service, which every American needs, the FCC should only accept bids from entities that can guarantee a Mean Opinion Score (MOS) of 4.0 or greater when latency in a call is .5 to 1.5 seconds long.

Currently, bidders conduct their own tests and report MOS scores to the FCC. This system is flawed. In order to ensure that MOS results are accurate, the FCC should conduct the tests and results should be made public. When analysts, subscribers, and would-be subscribers have access to accurate MOS data collected by FCC representatives, bidding entities will be obliged to maintain the level of service their customers deserve. Additionally, precious CAF II funding will be distributed to entities most able to offer the services rural America needs.

Once again, given the challenges of satellite service meeting acceptable metrics for telephone calls, ILSR has significant reservations about the FCC even allowing satellite providers to bid.

¹ <https://www.law.cornell.edu/uscode/text/47/214> and <https://www.law.cornell.edu/uscode/text/47/254>.

V. Data Caps Suppress America's Efforts to Improve Rural Connectivity

Data caps are a common feature of wireless broadband plans and are particularly egregious in satellite Internet access service. When a household or business uses their entire monthly allotment of bandwidth, they face the difficult choice of buying more bandwidth or ceasing online activity until the next billing cycle. For a family who needs access to the Internet so school children can complete homework or a parent can complete work from home, the choice becomes expensive. Families who depend on the Internet for multiple purposes are punished for their use of 21st century technology.

ILSR believes the 160 GB caps per month set by the FCC's CAF II order is too low and harms the ability of rural residents and businesses to take full advantage of modern technologies. However, the FCC should certainly not allow any data caps that are more restrictive than that bar.

Connect America Funds should be spent wisely on technologies that will meet the test of time, and therefore not require future subsidies in order to satisfy the undoubtedly growing bandwidth appetite of the plethora of devices in future households. One sign that a technology is unable to meet future needs is that it already must constrain usage in the current year.

VI. Satellite is Not an Acceptable Technology for the Connect America Fund Auctions

Satellite service is not an acceptable service with regard to the standards set out by the 1934 Communications Act. Satellite service is inadequate, as demonstrated by the lack of people that subscribe to it when they have a reasonable fixed service available. ILSR has never found anyone in this position, but if there are people subscribing to satellite services despite a fixed broadband alternative, the number is trivial. The vast majority of people that have used satellite Internet service have found it inadequate and take alternatives as rapidly as they become available.

VII. Conclusion

ILSR believes that as the FCC determines which bidders and projects should receive funding from the CAF II Program, the agency should take an approach that considers the long-term technological future of rural communities. In many ways, rural America is leaning more heavily on their ability to use the Internet because they are distantly located from urban centers. Rural communities' Internet access needs will only increase with time and their infrastructure must grow to accommodate those needs.

The FCC must ensure that future subsidies are used for technologies, business models, and firms that can serve every premise within the target area with an adequate technology that will allow residents and businesses to take advantage of modern technologies.

In order to award CAF II funding wisely and capitalize on the most promising opportunities, the agency should include the above requirements in the bidding process.

Respectfully submitted,
Institute for Local Self-Reliance